

## ARTICLE 89-04

### WATER MANAGEMENT PLANS FOR SURFACE COAL MINING OPERATIONS

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#### CHAPTER 89-04-01 GENERAL PROVISIONS

#### Section

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**89-04-01-01. Water management plan required.** A water management plan for all surface coal mining operations shall be required. The water management plan shall be submitted to the state engineer at the same time an application for a surface mining permit is submitted to the public service commission.

**General Authority:** NDCC 28-32-02, 61-02-11, 61-03-13

**Law Implemented:** NDCC 61-02-14

**89-04-01-02. Intent.** It is recognized that a variety of permits are required from the state water commission and the state engineer for activities affecting water resources on surface mining sites. It is also recognized that activities pursuant to one permit may be closely related to activities pursuant to another permit. Therefore, a water management plan for surface coal mining operations is being required to facilitate the processing and consideration of permit applications for surface coal mining operations where several permits may be required. This will ensure that the interrelated activities affecting both ground and surface hydrology are considered in total in the preparation and design of a surface coal mining operation and will allow the applicant to secure approval of required permits from

the state engineer in a single process, provided the appropriate requirements are satisfied.

**General Authority:** NDCC 28-32-02, 61-02-11, 61-03-13

**Law Implemented:** NDCC 61-02-14

**89-04-01-03. Application.** The requirements of this article shall be applicable to surface coal mining operations, as herein defined.

**General Authority:** NDCC 28-32-02, 61-02-11, 61-03-13

**Law Implemented:** NDCC 61-02-14

**89-04-01-04. Permit requirements satisfied.** Permits are presently required from the state water commission and the state engineer for the drainage of waters (North Dakota Century Code sections 61-15-08 and 61-16.1-41) and for the construction of dikes and dams (North Dakota Century Code section 61-16.1-38). A water management plan which satisfies the requirements of this article and has been approved by the state engineer, shall serve as approval of the permit requirements pursuant to North Dakota Century Code sections 61-15-08, 61-16.1-38, and 61-16.1-41. This does not preclude a permittee from securing a permit for additional construction affecting water resources which is necessary after the water management plan has been approved. Pursuant to North Dakota Century Code sections 61-16.1-38 and 61-16.1-41, local water management districts must also approve the appropriate activities. Therefore, those aspects of a water management plan which require the approval of local water management districts shall be submitted to and approved by the appropriate water management district.

**General Authority:** NDCC 28-32-02, 61-02-11, 61-03-13

**Law Implemented:** NDCC 61-02-14

**89-04-01-05. Other state agency requirements.** It is recognized that the public service commission, pursuant to North Dakota Century Code chapter 38-14.1, requires the submission of a total mining plan for approval by the public service commission before a mining permit is granted. The total mining plan required by the public service commission includes water management and water supply aspects. In order to avoid unnecessary duplication, the water management plan hereby required by the state water commission and the state engineer pursuant to these regulations shall be in the form required by the public service commission for water management related aspects of the total mining plan.

**General Authority:** NDCC 28-32-02, 61-02-11, 61-03-13

**Law Implemented:** NDCC 61-02-14

**89-04-01-06. Definitions.** Unless the context otherwise requires, the following definitions apply to this article:

1. "Acre-foot" of water is the volume required to cover one acre [.404 hectares], one foot [30.48 centimeters] deep. Acre-foot is the term

commonly associated with reservoir storage. It is equal to 325,850 gallons [1,233,342 liters].

2. "Active capacity" is the amount that can be released and utilized.
3. "Aquifer" means a zone, stratum, or group of strata that can store and transmit water in sufficient quantities for a specific use.
4. "Board of commissioners" means the board of commissioners of a water management district.
5. "Commission" means the state water commission (governor, commissioner of agriculture, and citizen members).
6. "Compaction" means the reduction of pore spaces among the particles of soil or rock, generally done by running heavy equipment over the earth materials.
7. "Dam" means any artificial barrier or obstruction, together with appurtenant works, if any, across a stream channel, water course, or natural drainage area which impounds or diverts water. All structures necessary to impound a single body of water shall be considered as one dam.
8. "Dead storage" is the amount of stored water that cannot be released due to physical conditions.
9. "Dike" means an embankment constructed of earth and or other suitable materials to protect land against overflow from streams or from diffused surface waters.
10. "District" means water management district.
11. "Embankment" means an artificial deposit of material that is raised above the natural surface of the land and used to contain, divert, or store water, support roads or railways, or other similar purposes.
12. "Enlargement" means any change or addition to an existing dam or its appurtenant works which increases, or may increase, the maximum quantity of water which can be stored therein.
13. "Ground water" means subsurface water that fills available openings in rock or soil materials such that they may be considered water-saturated.
14. "Hydrologic balance" means the relationship between the quality and quantity of inflow to, outflow from, and storage in a hydrologic unit such as drainage basin, aquifer soil zone, lake, or reservoir. It encompasses the quantity and quality relationships between precipitation, runoff, evaporation, and the change in ground and surface water storage.

15. "Hydrologic regime" means the entire state of water movement in a given area. It is a function of the climate, and includes the phenomena by which water first occurs as atmospheric water vapor, passes into a liquid or solid form and falls as precipitation, moves thence along or into the ground surface, and returns to the atmosphere as vapor by means of evaporation and transpiration.
16. "Impoundment" means a closed basin formed naturally or artificially built, which is dammed or excavated for the retention of water, sediment, or waste.
17. "Intermittent or perennial stream" means a stream or part of a stream that flows continuously during all (perennial) or continuously for at least thirty consecutive days (intermittent) of the calendar year as a result of ground water discharge or surface runoff. The term does not include an ephemeral stream which is one that flows continuously for less than thirty consecutive days of a calendar year and only in direct response to precipitation in the immediate watershed and whose channel bottom is always above the local water table.
18. "Owner" includes all who own, control, operate, maintain, manage, or propose to construct a dam, also their agents, lessees, trustees, and receivers.
19. "Permittee" means any individual, partnership, association, society, joint stock company, firm, company, corporation, instrumentality of the state, any governmental subdivision, or other business organization holding a permit to conduct surface coal mining and reclamation operations issued by the North Dakota public service commission.
20. "Recharge capacity" means the ability of the soils and underlying materials to allow precipitation and runoff to infiltrate and reach the zone of saturation.
21. "Recurrence interval" means the precipitation event expected to occur, on the average, once in a specified interval. For example, the ten-year twenty-four-hour precipitation event would be that twenty-four-hour precipitation event expected to be exceeded on the average once in ten years. Magnitude of such events are as defined by the national weather service technical paper number forty, "Rainfall Frequency Atlas of the U.S.", May 1961, and subsequent amendments or equivalent regional or rainfall probability information developed therefrom.
22. "Runoff" means precipitation that flows overland before entering a defined stream channel and becoming streamflow.
23. "Safety factor" means the ratio of the available shear strength to the developed shear stress on a potential surface of sliding determined by accepted engineering practice.

24. "Sediment" means undissolved organic and inorganic material transported or deposited by water.
25. "Sedimentation pond" means any natural or artificial structure or depression used to remove sediment from water and store sediment or other debris.
26. "Slope" means average inclination of a surface, measured from the horizontal. Normally expressed as a unit of vertical distance to a given number of units of horizontal distance, e.g., 1v to 5h equals twenty percent equals eleven and three-tenths degrees.
27. "Specifications" are written descriptions of the proposed construction.
28. "Stabilize" means any method used to control movement of soil, spoil piles, or areas of disturbed earth and includes increasing bearing capacity, increasing shear strength, draining, compacting, or revegetating.
29. "State engineer" means the state engineer, appointed pursuant to North Dakota Century Code section 61-03-01, who is also the chief executive officer of the commission.
30. "Surface coal mining operations" means:
  - a. Mining of coal by removing the suitable plant growth materials and the overburden lying above natural deposits thereof, and mining directly from the natural deposits thereby exposed.
  - b. The areas upon which such activities occur or where such activities disturb the natural land surface. Such areas shall also include any adjacent land, the use of which is incidental to any such activities, all lands affected by the construction of new roads or the improvement or use of existing roads to gain access to the site of such activities and for haulage and excavation, workings, impoundments, dams, ventilation shafts, entryways, refuse banks, dumps, stockpiles, overburden piles, spoil banks, culm banks, tailings, holes or depressions, repair areas, storage areas, processing areas, shipping areas and other areas upon which are sited structures, facilities, or other property or material on the surface, resulting from or incident to such activities.
31. "Surface coal mining and reclamation" means surface coal mining operations and all activities necessary and incidental to the reclamation of such operations. This term includes the term "surface coal mining operations".
32. "Surface water" means water, either flowing or standing, on the surface of the earth.

33. "Waste" means earth materials, which are combustible, physically unstable, or acid-forming or toxic-forming, wasted or otherwise separated from product coal and are slurried or otherwise transported from coal processing facilities or preparation plants after physical or chemical processing, cleaning, or concentrating of coal.
34. "Water table" means upper surface of a zone of saturation, where the body of ground water is not confined by an overlying impermeable zone.

**General Authority:** NDCC 28-32-02, 61-02-11, 61-03-13

**Law Implemented:** NDCC 61-02-14